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D5610-1TRN
Job Sheet 191949



Part No: D5610-1TRN

Job Qty: 1 ea

Part Name: EC130 Aft Crosstube Turning Detail



Part Weight: 0 lbs

Status: New

Priority: Medium

Job Created: 3/13/19

Job Tracking No:

Due Date: 4/12/19

Created By: Linda Lacelle

Type: Stock

Description:

Note: D5610 REV.B IPP REV:A 18.07.04 NEW ISSUE DD VERF:JFS

Ship Via:

Bill of Materials

Job Routing

Op No	Operation	Qty	Start Date	Due Date	Standard		Workcenter/Supplier		Sign-off
					Setup Hrs	Run Hrs	Workcenter / Supplier	Lead Time	
90	Start up Operation	1 Ea		4/12/19	0.00	0.00	Start Up Crosstubes-1		2019-03-26
100	Mori Seiki	1 pcs		4/12/19	4.40	2.38	Mori Seiki TL-40		
110	QC	1 pcs		4/12/19	0.00	0.00	QC2-1		
120	Mori Seiki	1 pcs		4/12/19	0.00	2.38	Mori Seiki TL-40		
130	QC	1 pcs		4/12/19	0.00	0.00	QC2-1		
140	QC	1 pcs		4/12/19	0.00	0.00	QC8		
145	Crosstubes	1 pcs		4/12/19	0.00	0.68	Crosstubes-1		6719-09-01
150	HandFXtube	1 pcs		4/12/19	0.00	1.00	Crosstubes-3		9-89
160	QC	1 pcs		4/12/19	0.00	0.00	QC7-1		
170	Packaging	1 pcs		4/12/19	0.00	0.00	Packaging3-1		
180	QC21-SA	1 Ea		4/12/19	0.00	0.00	QC21		

Part Op 100 - 1- Fill tube with sand & install plugs 2- Face and chamfer both ends as per Folio FC197 3- Turn first taper section on
Descriptions: both side

120 - 1- Turn second taper on both side 2- Scribe part # and batch # using vibrating stylus on the cuff as per Dwg D5610-TRN

145 - GRIND ONLY TRANSITION LINES SMOOTH LONGITUDE WAY.

150 - 1- handfinish X-TUBE INSIDE AND OUT

170 - LOCATION : LG014

Job BOM

Part / Item	Component Name	Quantity	Operation	Container
D6030-140	Tube, Seamless	1 pcs (1 ea)	90-Start up Operation	5078768

Job Allocations

Operation	Component Part	Required	Inventory	Allocated
90-Start up Operation	D6030-140	1	5	0

Part Specifications

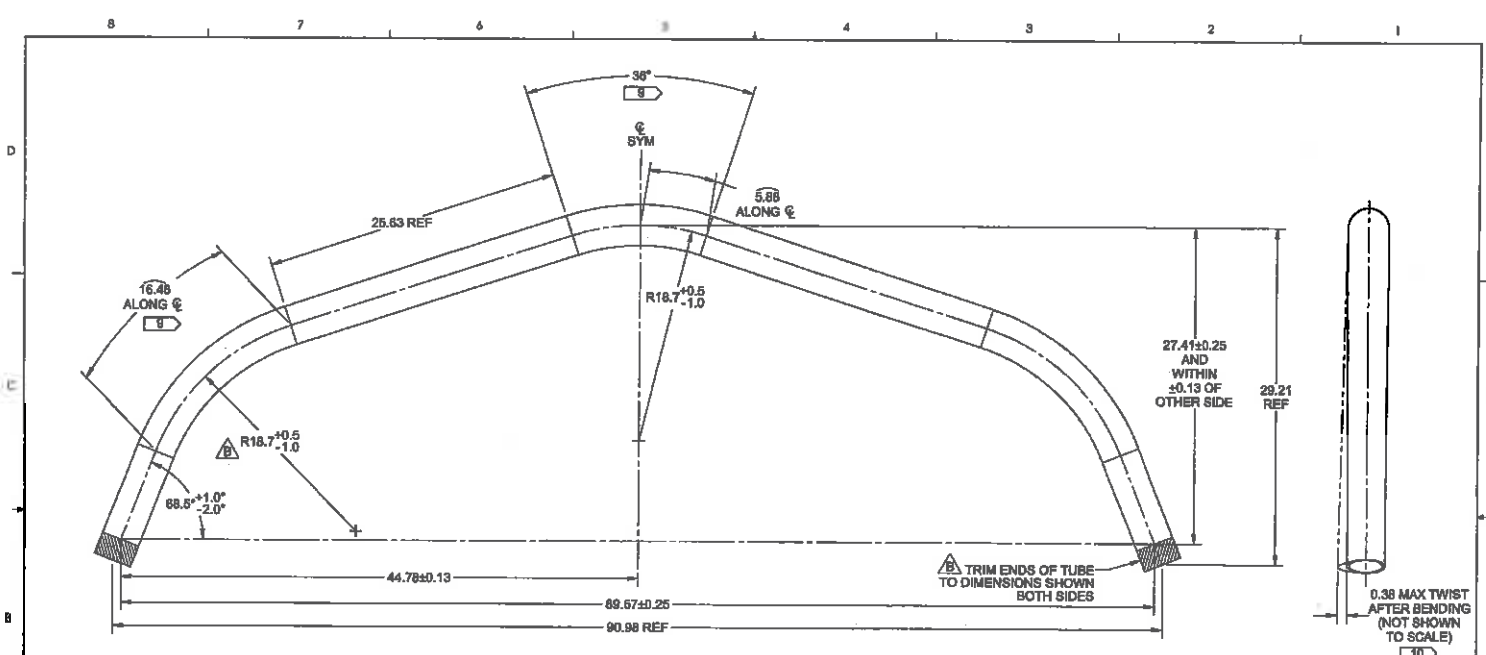
Specifications could not be found.

P.T.O.

DAS
66
9-89

SCRAP

91949



D5610-1 AFT X-TUBE (EC130)

NOTES:

- 1) MATERIAL: MAKE FROM D5610-1TRN
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: N/A
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: 30.9 lbs
- 8) EXTREME CARE MUST BE TAKEN TO PROTECT THE OUTSIDE SURFACE OF THE TUBE. THE OUTSIDE SURFACE MUST BE SMOOTH AND FREE FROM SURFACE DEFECTS SUCH AS SCRATCHES, NICKS, WRINKLES, OR DENTS. DEFECTS UP TO 0.005 MAY BE BLENDED OUT LONGITUDINALLY. CIRCUMFERENTIAL GRIND MARKS ARE UNACCEPTABLE
- 9) MAX AMPLITUDE OF RIBBLING ALONG BENT PORTION OF THE TUBE IS 0.030. MAX CRUSHING 2% OVER ALL BEND LOCATIONS.
- 10) MAX TWIST: WITH TUBE LAYED FLAT ON SURFACE, THE DIFFERENCE BETWEEN THE CUFF HEIGHTS FROM THE SURFACE MAY BE NO LARGER THAN 0.38

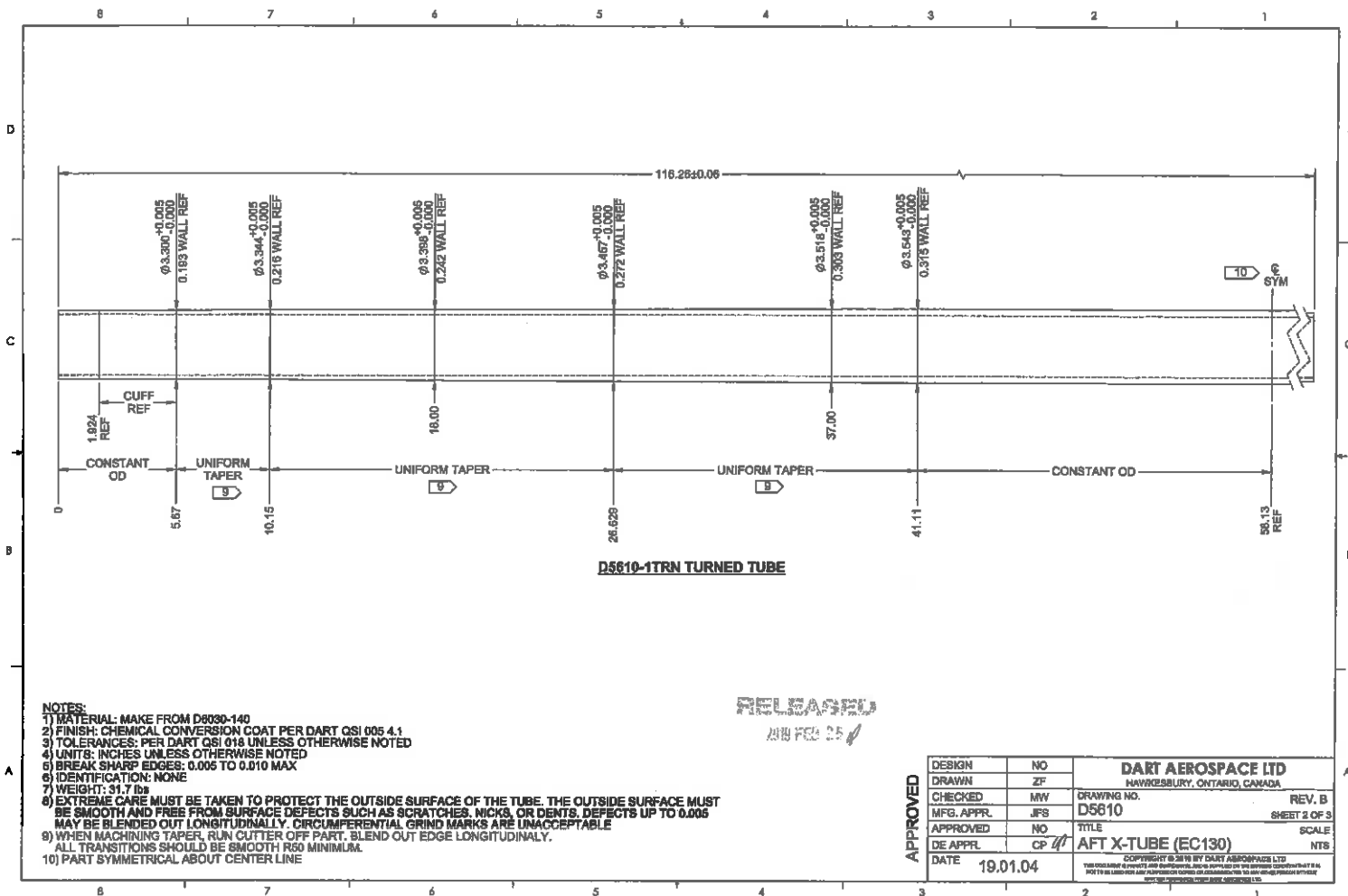
RELEASED

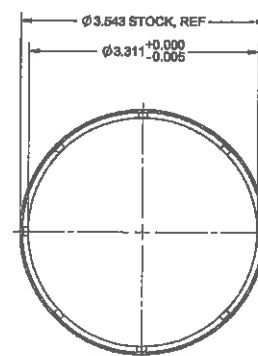
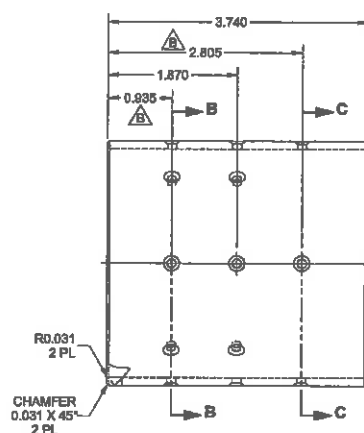
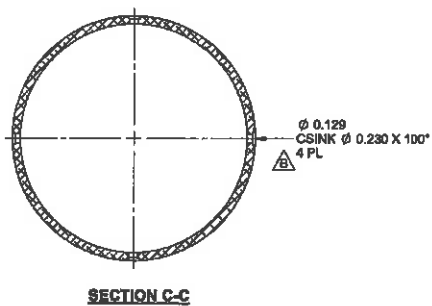
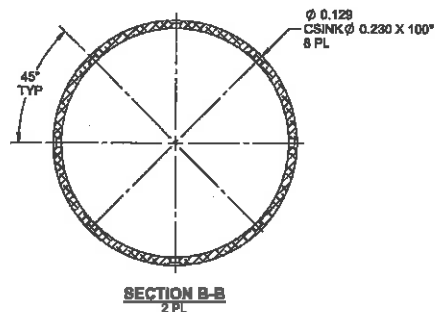
2019 FEB 25

Rev 15 - 507

APPROVED

B	D5610-1: ADDED OUTER BENDS AND TRIM ENDS, REMOVED SECTION A-A D5610-3: DELETED Ø0.086 HOLES FOR SADDLES, SECTION C-C ØSINK HOLES QTY 4 WAS QTY 6, DIM 0.935 WAS 0.916, 2.005 WAS 2.852			ZF	19.01.04	
	A	NEW ISSUE			ZF	16.05.07
REV.		DESCRIPTION			BY	DATE
DESIGN	NO	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA				
DRAWN	ZF					
CHECKED	MW					
MFG. APPR.	JFS					
APPROVED	NO					
DE APPR.	CP 47	DRAWING NO. D5610 REV. B TITLE AFT X-TUBE (EC130) SHEET 1 OF 3 SCALE NTS				
DATE	19.01.04					
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D5610-3 CUFF

NOTES:

- 1) MATERIAL: MAKE FROM D6030-140
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
- 3) TOLERANCES: PER DART QSI 010 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: 0.47 lbs

RELEASED

2019 FEB 25

APPROVED

DESIGN	NO	DART AEROSPACE LTD	
DRAWN	ZF	KAWKEBURY, ONTARIO, CANADA	
CHECKED	MW	DRAWING NO.	REV. B
MFG. APPR.	JFS	D5610	SHEET 3 OF 3
APPROVED	NO	TITLE	SCALE
DE APPR.	CP	AFT X-TUBE (EC130)	NTS
DATE	19.01.04	COPYRIGHT © 2014 BY DART AEROSPACE LTD	

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DART AEROSPACE LTD		Work Order: 191949
Description: Crosstube Assembly		Part Number: 05610-1 TRN
Inspection Dwg: B	Rev: B	Page 1 of 2

FIRST ARTICLE INSPECTION CHECKLIST

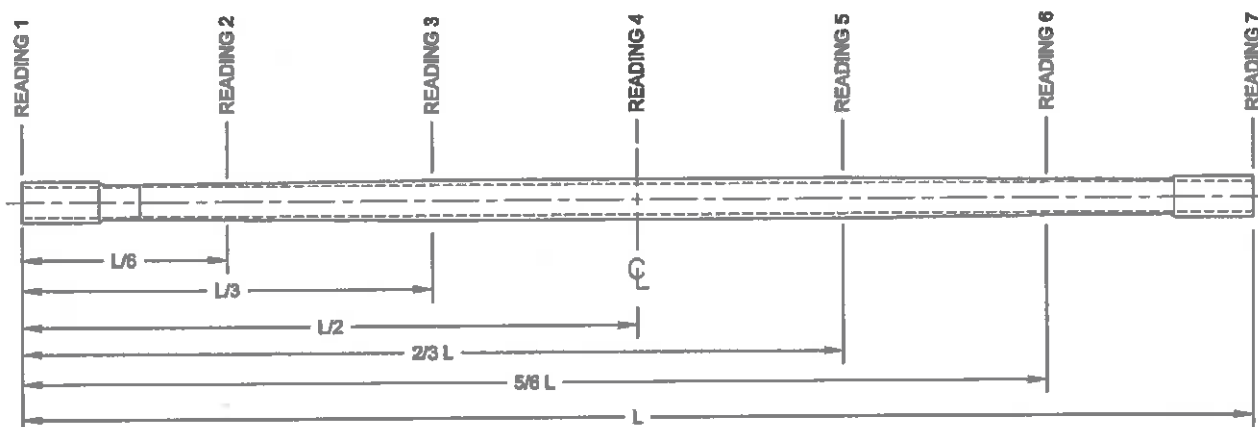
	Inspection Sheet Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
SIDE A	3.300	±0.005/-0.000	3.303	✓		CNC-05	
	3.344		3.348	✓		↓	
	3.398		3.399	✓			
	3.457		3.462	✓			
	3.518		3.523	✓			
	3.543		3.542	✓			} Stock, REF
	3.543		3.544	✓			
SIDE B	3.300	-0.003, 0.001	3.304	✓		CNC-05	
	3.344			✓		↓	
	3.398			✓			
	3.457			✓			
	3.518						
	3.543					} Stock, REF	
	3.543						
	116.26	±0.30	116.25	✓		Tape	

Accepted
12/4/1

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DART AEROSPACE LTD	Work Order: 191949
Description: Crosstube Assembly	Part Number: 05610-1 TRN
Inspection Dwg: B	Rev: B
	Page 2 of 2

WALL THICKNESS MEASUREMENT



Location	WALL THICKNESS MEASUREMENT (IN)				Deviation Δw (max-min)	TOLERANCE
	w1	w2	w3	w4		
READING 1 L= 0"	.190	.197	.203	.194	.013	± 0.030  19/03/38
READING 2 L= 19.38	.245	.239	.250	.263	-.024	
READING 3 L= 38.75	.314	.304	.315	.317	.013	
READING 4 L= 58.13	.317	.324	.321	.315	.009	
READING 5 L= 77.51	.314	.310	.316	.317	.007	
READING 6 L= 96.88	.247	.248	.258	.256	.011	
READING 7 L= 116.26	.192	.203	.203	.192	.011	

Calibration Result

Actual Block Thickness: 100-400

Sitiescan 250 Measured Thickness: 100-400

Measured by: DAS 66		Audited by: DAS 67	Preliminary Approval:	
Date: 9-89 2019-03-28		Date: 9-89 19-09-01	Date:	

Rev	Date	Change	Revised by	Approved
B	10.04.14	Added preliminary approval	KJ	
C	12.06.01	Wall thickness form added	KJ	

Entered:

Date:

WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

NCR No.

Route update only ☐

Job: _____		DISPOSITION		DEPARTMENT/PROCESS				Engineering																																							
Part No. <u>DS60-1 TRN</u>		☒ Rework ☐ Scrap ☐ Use-as-is		☐ Skid-tube ☐ Machining ☐ Large Fab				☐ Eng. (Non-AW) ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging		☐ Water Jet ☐ Supplier ☐ Quality																																					
Date:	Sequence #:	QTY Affected:		MRB (QS1042)																																											
Description Work Order Deviation		Disposition																																													
Corrosion pitting and scratches		Grind to remove pitting. Measure wall thickness and diameters after grinding and polish See engineering for further disposition																																													
Root Cause		<table border="1"> <tr> <td>Operator</td> <td></td> <td>Positioned Wrong</td> <td></td> </tr> <tr> <td>Manufacturing Process</td> <td></td> <td>Outside Tolerance</td> <td></td> </tr> <tr> <td>Equip/Tooling</td> <td></td> <td>Drawing</td> <td></td> </tr> <tr> <td>Handling/Preservation</td> <td></td> <td>Finish</td> <td></td> </tr> <tr> <td>Material</td> <td></td> <td>Part Lost/Missing</td> <td></td> </tr> <tr> <td>Product Improvement</td> <td></td> <td>Misread</td> <td></td> </tr> <tr> <td>Process Improvement</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Human Factors</td> <td></td> <td></td> <td></td> </tr> </table>									Operator		Positioned Wrong		Manufacturing Process		Outside Tolerance		Equip/Tooling		Drawing		Handling/Preservation		Finish		Material		Part Lost/Missing		Product Improvement		Misread		Process Improvement				Human Factors								
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ND 19.05.14

Completed By

Lead hand / Supervisor

QC / QA Coordinator

DAS

68

9-89

JUL 31 2019

Entered: _____ Date: _____

WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

NCR No. _____

Route update only ☐

Job: <u>191949</u>		DISPOSITION		DEPARTMENT/PROCESS				Engineering			
Part No. <u>D5610-1 TRN</u>		Rework ☐ Scrap ☒ Use-as-is ☐		Skid-tube ☐ Machining ☐ Large Fab ☐		Cross tube ☐ Small Fab ☐ Finishing ☐		Eng. (Non-AW) ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐		Water Jet ☐ Supplier ☐ Quality ☐	
Date: _____		Sequence #: _____		QTY Affected: _____		MRB (QSI042) <u>N.O. 19.07.31</u>					
Description Work Order Deviation				Disposition							
<u>Corrosion pitting exceeds allowables</u>				<u>Scrap</u>							
Completed By <u>N.O. 19.07.31</u>				Lead hand / Supervisor							
QC / QA Coordinator <u>68</u>				JUL 31 2019							

Root Cause		FAULT CATEGORY									
Operator	Pressure/Forced	Contamination	Power Loss/Surge	Positioned Wrong							
Manufacturing Process	Bending	Misaligned/off center	Folio/Program	Outside Tolerance							
Equip/Tooling	Crushing	BOM/Route	Grain Direction	Drawing							
Handling/Preservation	Cracks	Broken/Damage/Defect	Weld	Finish							
Material	Crimp/kink/Ripple/Wave/Twist	Incomplete/Unclear Instructions	Wrong Stock Pulled	Part Lost/Missing							
Product Improvement	Marks/Chatter	Drill Holes	Out of Sequence	Misread							
Process Improvement	Mislabeled	Fit/Function	Off-set/Set-up								
Human Factors	Other/Details:										